DESCRIPTIVE INTERPRETATION FLUORESCEIN CONFERENCE

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Fluorescence
The property of emitting light that results from the absorption of light of a shorter wavelength; in ocular angiography, longer wavelength light (e.g., “yellow”) is produced by excitation of fluorescent dye molecules by a light of shorter wavelength (e.g., “blue”).

Hyperfluorescence
An *increase* in the level of fluorescence at a specific site, relative to adjacent areas, when compared to the same area at the same time in the angiogram.

Types of Hyperfluorescence

Leakage – the passage of dye through a membrane that normally is impermeable (tight junctions in the retinal vessels or the pigment epithelium).

Pooling – dye collecting in an anatomic space between two tissue planes.

Staining – dye present inside one tissue, e.g., inside the retina.

Transmission defect – dye showing through a “window”, a ‘porthole’ (e.g., RPE atrophy, drusen).

Determining types of hyperfluorescence:

Is it present at the start of an angiogram?

Does the *degree* (intensity) of hyperfluorescence increase or decrease (“fade”) over time?

Does the *area* of hyperfluorescence increase in size or stay the same throughout the study?

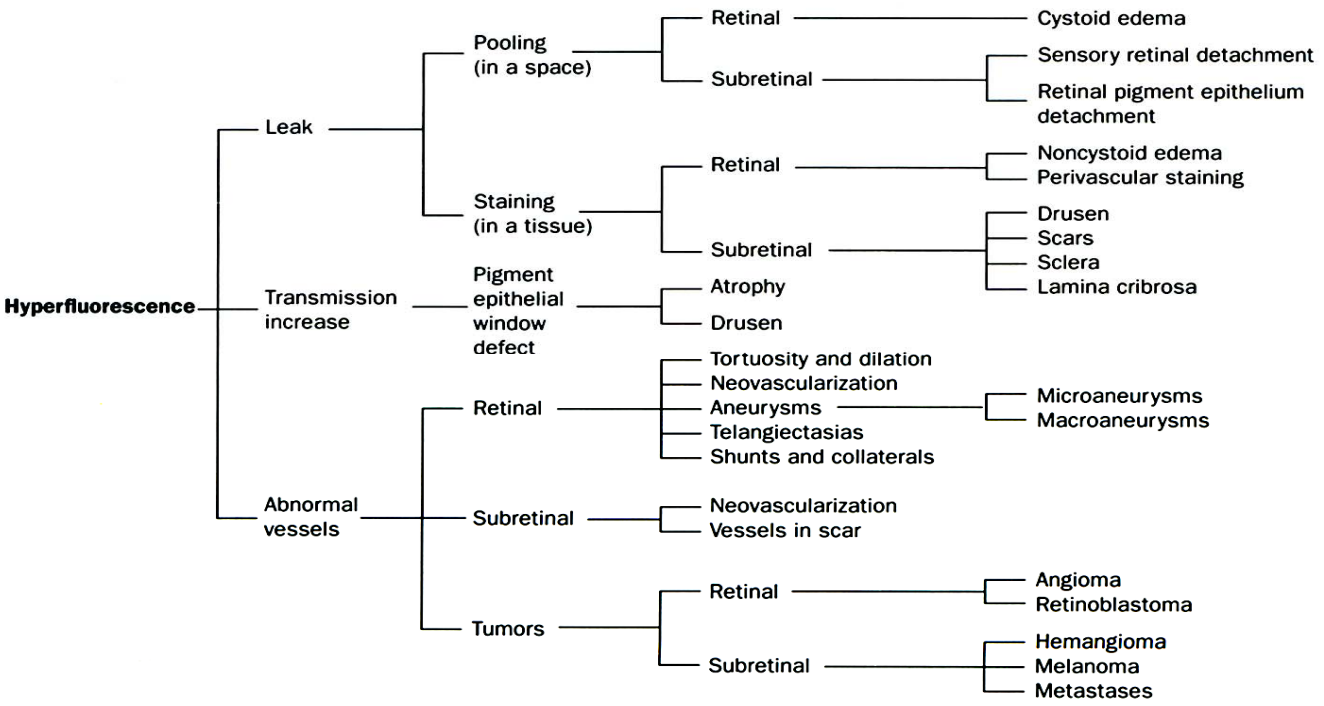
Hypofluorescence
A relative or absolute *decrease* in the intensity of fluorescence at a specific site relative to adjacent sites and the normal stage of the angiogram.

Types of Hypofluorescence

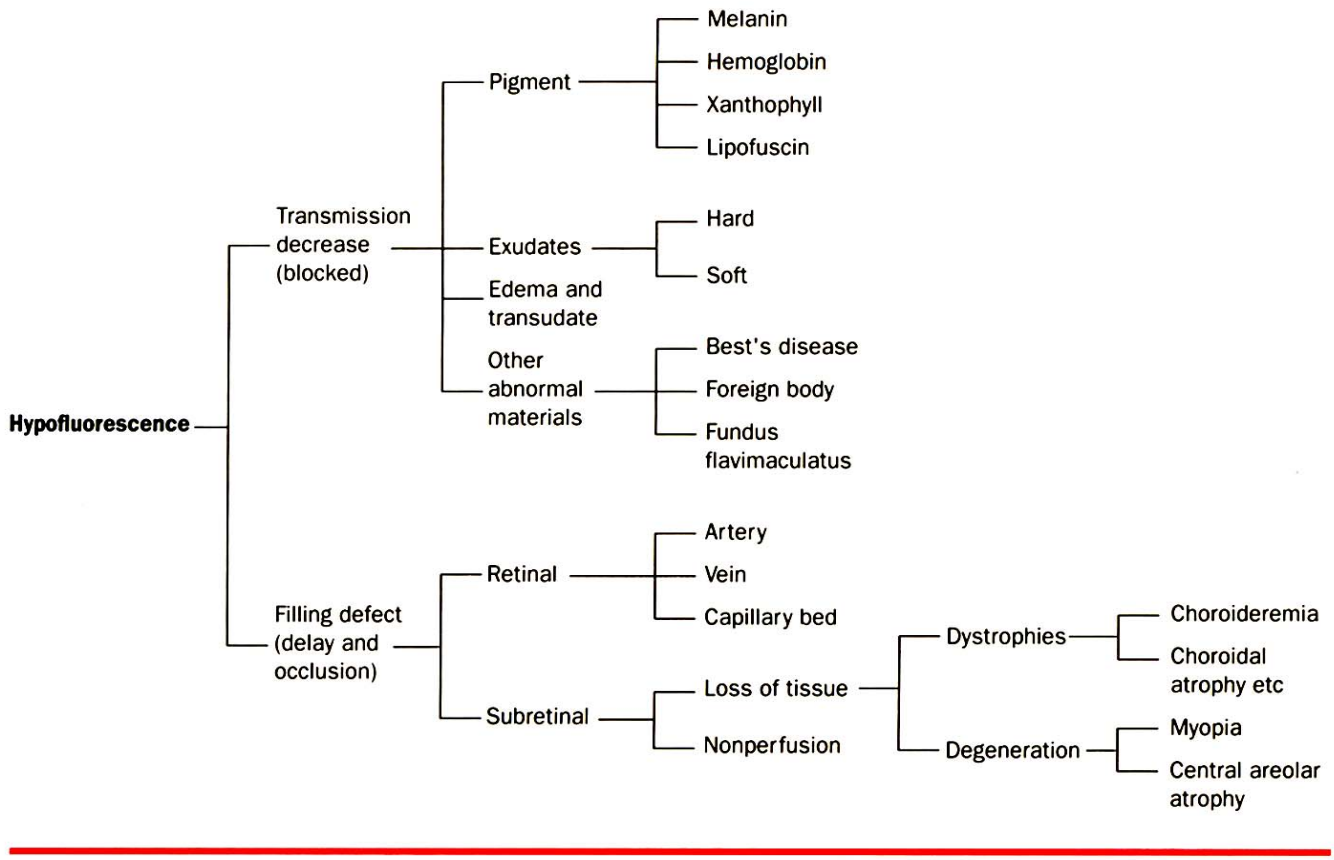
Blocked Fluorescence – absence of or marked decrease of fluorescence, most often caused by the presence of an opaque substance such as blood or pigment, between the fluorescing surface and the observer.

Filling defects –absence of dye due to failure of circulation such as occlusion or non-perfusion of a vascular bed.

Hyperfluorescence



Hypofluorescence



Invaluable References

- Saine P, Tyler M, Ophthalmic Photography: Retinal Photography, Angiography, and Electronic Imaging (2nd ed.) Boston; Butterworth-Heinemann, 2002.
- Gass Donald M, Stereoscopic Atlas of Macular Diseases: Diagnosis and Treatment (4th ed.), St. Louis; Mosby, 1997
- Berkow JW, Flower RW, Orth DH, Kelley JS, Fluorescein and Indocyanine Green Angiography: Technique and Interpretation. San Francisco; American Academy of Ophthalmology, 1997
- Yanuzzi LA, Flower RW, Slakter JS, Orlock DA, Indocyanine Green Angiography, St. Louis; Mosby, 1997

IT'S YOUR TURN! HAVE FUN! PLAY "RESIDENT"!

What to do:

- Use the pointer as you describe what you see
- State which eye and identify the disc and macula
- Think dynamically and dimensionally:
  Describe the type of fluorescence (hyper/hypo) you see.
  Describe its dynamic: blocking? leaking? staining? pooling?
  Where is the altered fluorescence located: retina? RPE?